

IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF DELAWARE

VOLTERRA SEMICONDUCTOR )  
LLC, )  
Plaintiff, ) Redacted - Public Version  
v. )  
MONOLITHIC POWER SYSTEMS, ) C.A. No. 19-2240-CFC-SRF  
INC., ) [REDACTED]  
Defendant. )

**DEFENDANT'S BRIEF IN SUPPORT OF THEIR *DAUBERT* MOTION TO  
EXCLUDE THE TESTIMONY OF PLAINTIFF'S DAMAGES EXPERT,  
DEFOREST MCDUFF, PH.D.**

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Ex. B	Reply Expert Report of DeForest McDuff, Ph.D. (Oct. 8, 2021)
Ex. C	Excerpt of MAXIM_00014151
Ex. D	Excerpts from Transcript of DeForest McDuff, Ph.D.'s Deposition (Oct. 21, 2021)
Ex. E	Excerpts from Transcript of Alberto Viviani's Deposition (Oct. 19, 2021)
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Ex. G	Excerpt from Transcript of Jeffrey Koch's Deposition (Sept. 10, 2021)
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Ex. I	Excerpt from Volterra's Second Supplemental Responses to MPS's First Set of Interrogatories (Nos. 1-6)
Ex. J	[REDACTED]
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## **I. NATURE AND STAGE OF PROCEEDINGS**

Volterra Semiconductor LLC (Volterra) and Monolithic Power System, Inc.’s (MPS) exchanged opening expert reports on September 17, rebuttal expert reports on October 1, and reply expert reports on October 8. Expert discovery concluded on October 29. No trial date is currently set.

## **II. STATEMENT OF FACTS**

Volterra’s damages expert, Dr. DeForest McDuff calculates a reasonable royalty for MPS’s alleged infringement of the Asserted Patents under three theories: direct infringement by the (1) MPS Power Solution demonstrated at the 2019 APEC and (2) Evaluation Board<sup>1</sup>; and (3) indirect infringement by NVIDIA’s Power Solution incorporated into NVIDIA DGX Systems. Ex. A ¶¶ 12, 19. Dr. McDuff opines that the outcome of a hypothetical negotiation would be a per-unit royalty for any indirect infringement and a lump-sum royalty payment for any direct infringement. *Id.* ¶ 53. For the per-unit royalty, Dr. McDuff purports to derive his royalty rate using either (1) an average price premium using three product price comparisons, or the average of two approaches based on (2) profit margins from

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<sup>1</sup> MPS has contemporaneously moved to exclude all opinions of Volterra’s technical expert related to this Evaluation Board on grounds that he fails to provide any technical analysis showing that the Evaluation Board is an Accused Product. Should that motion be granted, the full reasonable royalty calculated for this Board should be independently excluded.

MPS and Maxim and (3) a royalty rate from a prior [REDACTED] licensing agreement. *Id.* ¶¶ 68-95, Ex. D-1 to D-3.

**A. Dr. McDuff's "Apportionment Factor"**

All of Dr. McDuff's damages opinions rely on a "technology apportionment factor" that purportedly apportions the claimed damages to the patented technology as required by law. Dr. McDuff arrives at a technology apportionment rate by comparing a product that allegedly practices the patent [REDACTED] with products that do not to calculate (i) [REDACTED]

[REDACTED]

[REDACTED] Ex. A ¶¶

73-74. Based on this calculation, Dr. McDuff concludes that a technology apportionment factor of 61.7% is applicable to all of his damages theories.

The product that forms the foundation of Dr. McDuff's entire technology apportionment analysis, [REDACTED] however, was never disclosed by Volterra in any contentions, briefings, or testimony before fact discovery cut-off. Although Volterra produced a spreadsheet created [REDACTED] that purports to list prices [REDACTED], Volterra did not identify this spreadsheet in its discovery responses until the last day of fact discovery, even

though MPS served an interrogatory seeking this information on September 14, 2020. Ex. I at 22 (Interrogatory No. 2); Ex. C (MAXIM\_00014151).

Because [REDACTED], the prices Dr. McDuff relies on from the late-identified spreadsheet are speculative and unreliable. Ex. E at 55:2-25. They are a lay witness' guesses about [REDACTED] pricing based on *other* multiphase solutions. *Id.* As to unpatented products Maxim's solution is compared against, those prices are guesses as well. Mr. Alberto Viviani, a corporate fact witness, admitted that [REDACTED]

[REDACTED]  
[REDACTED] *Id.* at 56:12-24. Mr. Viviani did not [REDACTED]  
[REDACTED]. *Id.* at 56:25-57:13. And Dr. McDuff did not independently verify any of the pricing information contained in the prepared spreadsheet. Ex. D at 168:17-171:10.

But that is not all. There is no competent evidence in the record that [REDACTED]  
[REDACTED] even practices any of the Asserted Patents—a necessary predicate for Dr. McDuff's technology apportionment analysis. In his deposition, Dr. McDuff admitted that [REDACTED]  
[REDACTED]. Ex. D at 176:11-177:19. Mr. Viviani has not been proffered as a technical expert nor as a lay opinion witness. Ex. H (Volterra's expert disclosures). Mr. Viviani [REDACTED]

[REDACTED]  
[REDACTED]  
[REDACTED] practice the Asserted Patents. Ex. E at 43:18-44:22. Volterra's technical expert expressed no opinion, to Dr. McDuff or otherwise, as to whether [REDACTED] practices the Asserted Patents either. Ex. B ¶ 14; Ex. D at 176:11-177:19.

Indeed, Volterra did not produce any technical documents in this litigation that would even allow an expert to determine whether [REDACTED] practices the Asserted Patents—no datasheets, technical specification, or anything else. The most relevant component necessary to the analysis [REDACTED] [REDACTED] is manufactured by a third-party [REDACTED] and the record is devoid of anything about that component because Volterra failed to disclose its intent to rely on [REDACTED] until the last day of discovery.

#### **B. Dr. McDuff's Royalty Base for his Per-Unit Royalty Opinions**

For his per-unit royalty opinions, Dr. McDuff determined the royalty base by tabulating sales of MPS's controllers and power stages. Ex. A ¶ 39-40, 105. [REDACTED] these sales occur entirely overseas—the MPS components [REDACTED] [REDACTED]. Ex. A ¶ 102; Ex. K. Although some of these products may ultimately be incorporated in a NVIDIA DGX server imported into the United States, Dr. McDuff acknowledges that not all of these servers will be imported into

the U.S. Ex. A ¶ 102. For example, Dr. McDuff acknowledged that [REDACTED] [REDACTED] and only 27% of Amazon servers worldwide are located in the U.S. *Id.* Dr. McDuff, however, makes no effort to limit his royalty base to NVIDIA DGX servers imported into the U.S. *Id.* ¶ 103. His damages base is unreliable since it includes indisputably *non*-infringing products that are not made, used, sold, offered for sale, or imported into the U.S.

### **C. Dr. McDuff's Comparable License Analysis**

Dr. McDuff offers an alternative royalty approach that relies on the royalty rate from a single [REDACTED] agreement. Ex. A ¶¶ 91-95. The 2005 agreement between [REDACTED] allows manufacture and sale of products in territories outside of the U.S. Ex. J. Although this agreement does not [REDACTED] Dr. McDuff baldly concludes the agreement is technically and economically comparable.

### **III. SUMMARY OF ARGUMENT**

All of Dr. McDuff's damages opinions are unreliable because (i) they all rely on a "technology apportionment factor" that is based on imaginary financial information about [REDACTED] that no technical expert has analyzed, let alone opined that it practices the Asserted Patents as Dr. McDuff claims and/or (ii) the royalty base includes non-infringing foreign sales. Additionally, the reasonable royalty calculations based on a non-comparable license is unreliable.

## IV. LEGAL STANDARD

### A. *Daubert* Standard for Excluding Expert Testimony

Expert testimony is admissible only if it is “based on sufficient facts or data” and is “the product of reliable principles and methods... reliably applied... to the facts of the case.” FED. R. EVID. 702. The court acts as a gatekeeper to “ensur[e] that an expert’s testimony both rests on a reliable foundation and is relevant to the task at hand.” *Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579, 597 (1993).

“To be admissible, expert testimony opining on a reasonable royalty must ‘sufficiently [tie the expert testimony on damages] to the facts of the case.’ *Exmark Mfg. Co. v. Briggs & Stratton Power Prods. Grp., LLC*, 879 F.3d 1332, 1349 (Fed. Cir. 2018) (citations omitted). Where “the patentee fails to tie the theory to the facts of the case, the testimony must be excluded.” *Id.*

Reasonable royalty damages must be both apportioned to the value of the patented invention and based on reliable evidence. For apportionment, an expert must “carefully tie proof of damages to the claimed invention’s footprint in the market place.” *VirnetX, Inc. v. Cisco, Sys.*, 767 F.3d 1308, 1327 (Fed. Cir. 2014).

### B. Burden to Prove Damages

Volterra has the burden to prove which products are infringing and the damages “adequate for compensation of infringement.” *See Lucent Techs., Inc. v. Gateway, Inc.*, 580 F.3d 1301, 1324 (Fed. Cir. 2009) (“The burden of proving damages falls on the patentee.”). In order to prove that certain sales are relevant to

damages, Courts require patentees to affirmatively show they are connected to infringing acts *within the United States*. *See, e.g., Litecubes, LLC v. Northern Light Products, Inc.*, 523 F.3d 1353, 1363 (Fed. Cir. 2008) (the statute “in no way distinguishes the territorial limitation from any of the other elements necessary to show infringement”).

## **V. ARGUMENT**

### **A. Dr. McDuff’s Apportionment Factor of 61.7% is Unreliable**

Dr. McDuff arrives at his technology apportionment factor by calculating [REDACTED]

[REDACTED] attributable to the patented features by comparing [REDACTED]

[REDACTED] to competitor products. This analysis hinges on the assumption that (i) [REDACTED] practices the Asserted Patents, and (ii) accurate pricing information exists [REDACTED]. Ex. A ¶¶ 69a, 73-74; Ex. B ¶ 14. Here, both assumptions are unreliable, rendering all of Dr. McDuff’s damages conclusions unreliable.

#### **1. Dr. McDuff Has No Reliable Basis To Conclude That the [REDACTED] Practices The Asserted Patents.**

Volterra bears the burden to establish that [REDACTED] practices the Asserted Patents so that it is a valid and reliable comparison for Dr. McDuff’s technology apportionment analysis. *See Lucent Techs.*, 580 F.3d at 1324. It is black-letter law that competent testimony from a technical expert is necessary to establish the [REDACTED] alleged practice of the Asserted Patents. *Id.* at 1330

(affirming order excluding expert testimony for failure to show technological comparability), *W.L. Gore & Associates, Inc. v. C.R. Bard, Inc.*, No., 2015 WL 7761056, at \*3 (D. Del. Dec. 2, 2015) (excluding damages expert testimony for failure to disclose opinions regarding technical comparability). This Court has held that to “pass muster under *Daubert*,” there “**must** be a showing—disclosed in one or more of [the technical expert]’s expert reports—that the claimed technologies in the [asserted patent and license] are comparable.” *W.L. Gore*, 2015 WL 7761056, at \*3.

Here, the record is devoid of any evidence about whether [REDACTED]

[REDACTED] practices the Asserted Patents. Volterra’s technical expert did not analyze [REDACTED], let alone opine that it practices any of the Asserted Patents. Ex. D at 163:17-22, 175:24-176:10. Volterra has not even produced the documents necessary to do this analysis. There are no datasheets, technical specifications, or physical samples in the record that would have permitted MPS to test and verify Dr. McDuff’s conclusions about his technology apportionment factor.

Dr. McDuff conceded that his assumption that [REDACTED] practices the Asserted Patents is based solely on statements by Mr. Viviani. Ex. D at 174:14-177:19. But Mr. Viviani is not a technical expert and has not been proffered as a lay opinion witness. Moreover, he [REDACTED] [REDACTED] or any of its internal components to the Asserted Patents. Ex. E at 21:23-22:2, 43:19-22. Mr. Viviani was not even able to

[REDACTED]

[REDACTED] *Id.* at 43:18-

44:22.

Despite these deficiencies, Dr. McDuff baldly opines that [REDACTED]

[REDACTED] is “similar” to the MPS components in the accused NVIDIA Power Solution. Ex. B ¶ 14. But again, Dr. McDuff cites nothing for this conclusion. Besides, it is undisputed that Dr. McDuff is an economic expert, not a qualified technical expert, so his opinions on “similarity” are entitled to zero weight. As discussed, no competent technical expert analyzed [REDACTED] in this case. Because Volterra cannot establish that [REDACTED] practices the Asserted Patents, Dr. McDuff’s technology apportionment factor is unreliable and all of his calculations that apply it should be excluded.

Even if [REDACTED] is deemed a practicing product (although there is no evidence supporting this), the apportionment factor should still be excluded for the independent reason that it is not tied to the Asserted Patents. A reasonable royalty analysis to “carefully tie proof of damages to the *claimed invention’s* footprint in the market place.” *ResQNet.com, Inc. v. Lansa, Inc.*, 594 F.3d 860, 869 (Fed. Cir. 2010) (emphasis added). Dr. McDuff attempts to prop up his opinions by claiming that Dr. Dickens opines that “the three Patents-in-Suit cover the most foundational aspects of the [coupled inductor] technology and provide the

broadest benefits of coupled inductor technology.” Ex. A ¶ 34. But that testimony is insufficient to tie the apportionment factor (based only on [REDACTED] [REDACTED]) to the Asserted Patents. Vague “benefits” are no substitute for the analysis required to tie the patented technology (not a general technical area) to a proffered royalty rate. *See Guardant Health, Inc. v. Foundation Medicine, Inc.*, 2020 WL 2461551, at \*17-19 (D. Del. May 7, 2020) (excluding apportionment analysis where technical expert testified that the asserted patents were “foundational and essential” but failed to “tie the relative value of the patented features to [the] accused products, which is meant to be the focus of the apportionment analysis.”). Dr. McDuff’s reliance on Mr. Viviani fares no better because, as discussed, he is not qualified to opine on the Asserted Patents.

## **2. Dr. McDuff’s Apportionment Relies on Unreliable Pricing Estimates**

Separately, Dr. McDuff’s technology apportionment factor should be excluded because the underlying pricing data is unreliable. *Power Integrations, Inc. v. Fairchild Semiconductor Intern. Inc.*, 711 F.3d 1348, 1373 (Fed. Cir. 2013) (“the data cannot be derived from a manifestly unreliable source”); *In re Paoli*, 35 F.3d 717, 749 n. 19 (3d. Cir. 1994). “If the data underlying ‘the expert’s opinion are so unreliable that no reasonable expert could base an opinion on them, the opinion resting on that data must be excluded.’” *Montgomery County v. Microvote Corp.*, 320 F.3d 440, 448 (3d. Cir. 2003) (citations omitted). This Court has excluded

opinions based on “estimates” where the expert failed to perform independent verification. *See CareDx, Inc. v. Natera, Inc.*, No. 19-662-CFC-CJB, 2021 WL 1840646, at \*3 (D. Del. May 7, 2021) (excluding expert’s damages opinion where the expert did not verify underlying cost estimates); *see also ZF Meritor LLC v. Eaton Corp.*, 646 F. Supp. 2d. 663, 667 (D. Del. 2009) (excluding opinion where they relied on estimates without knowing the validity of the underlying data).

Here, Dr. McDuff relies on [REDACTED] spreadsheet for pricing information as well as competitive products. Ex. A ¶ 73-74. But the prices in that spreadsheet are speculative and imaginary. The [REDACTED], has never been sold commercially, so real-world pricing information does not exist. Ex. E at 55:2-25. Dr. McDuff performed no independent verification of the prices contained in the spreadsheet or otherwise ensured that they are reliable. Ex. D at 168:17-171:10 (confirming he has “not seen additional support” for the prices); *see also CareDx*, 2021 WL 1840646, at \*3; *ZF Meritor*, 646 F. Supp. 2d. at 667.

Dr. McDuff again punts to Mr. Viviani for reliance on the spreadsheet with imaginary prices. Ex. A ¶¶ 28, 73-74. But Mr. Viviani admitted that [REDACTED]

[REDACTED] Ex. E at 55:2-25 [REDACTED]  
[REDACTED]. And Mr. Viviani confirmed that [REDACTED]  
[REDACTED] *Id.* Regarding the competitor [REDACTED] product that [REDACTED] is compared against, Mr.

Viviani admits that [REDACTED]

[REDACTED] *Id.* at 56:12-24. Mr. Viviani did not [REDACTED]

[REDACTED] that would have enabled

Dr. McDuff, or anyone else, to test and verify the pricing data. *Id.* at 56:25-57:13.

Mr. Viviani cannot save Dr. McDuff's opinions.

In short, the speculative nature of the price estimates, compounded by the fact that they belong to hypothetical sales of irrelevant products, makes the pricing "data" Dr. McDuff relies on for his technology apportionment factor wholly unreliable. His testimony on the purported technology apportionment factor must be excluded. *Power Integrations*, 711 F.3d at 1373; *In re Paoli*, 35 F.3d at 749 n. 19.

**B. Dr. McDuff's Royalty Base Improperly Includes Non-Infringing Sales**

Dr. McDuff's per-unit reasonable royalty approaches should be excluded because they all rely on a royalty base that fails to exclude, or even account for, non-infringing sales. *See AstraZeneca AB v. Apotex Corp.*, 782 F.3d 1324, 1343 (Fed. Cir. 2015) ("[t]he royalty base . . . cannot include activities that do not constitute patent infringement"). Volterra bears the burden to establish that its damages calculation is only predicated on acts *within the United States*. *See Carnegie Mellon University v. Marvell Technology Group, Ltd.*, 807 F.3d 1283, 1306-07 (Fed. Cir. 2015); *Power Integrations*, 711 F.3d at 1375.

Dr. McDuff makes no effort to establish that his royalty base includes only infringing sales. To the contrary, Dr. McDuff freely acknowledges that his royalty base reflects all sales of MPS [REDACTED] and [REDACTED] [REDACTED], which are manufactured abroad, sold abroad, and shipped to foreign locations. Ex. A ¶ 17 [REDACTED] [REDACTED]; *see also id.* ¶¶ 20, 39-40, 103; Ex. K [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED]). Dr. McDuff admitted the royalty base should only include infringing units. Ex. B ¶ 9.

Dr. McDuff identifies *no* evidence showing that any of the MPS sales included in his royalty base are connected to an infringing act within the United States. *See* Ex. D at 145:13-147:19 (confirming that he does not have additional information about the products that are imported into the U.S.). Dr. McDuff even concedes that not all of these foreign MPS sales enter the United States. For example, Dr. McDuff says [REDACTED] is a customer for NVIDIA DGX servers (some of which may

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<sup>3</sup> Though Dr. McDuff states that the agreement [REDACTED] is governed by California law, Ex. A ¶ 102b, Volterra cites no authority to support that contract law could dictate the location of a sale for purposes of infringement. And even if [REDACTED] were deemed sales in the U.S., they are irrelevant because they are **not** acts of direct infringement. *See Power Integrations*, 711 F.3d at 1371.

incorporate NVIDIA’s Power Solution), but acknowledges that only 27% of all Amazon server locations are in the United States. Ex. A ¶ 102c. Dr. McDuff also cites to “[t]hird-party research” that states “North America accounted for over 40% of revenues for the global server market.” *Id.* ¶ 102d. Despite these statistics, assuming they are reliable or relevant,<sup>4</sup> Dr. McDuff does not remove a single foreign MPS sale from his royalty base. Ex. A ¶ 103.

None of the above sources establishes whether any of the MPS units are directly connected to any infringing acts in the United States. Absent such information, the Court cannot engage in guesswork to fix the royalty base. Thus, Dr. McDuff’s royalty base indisputably includes *non*-infringing products that are not made, used, sold, offered for sale, or imported into the U.S., and his per-unit royalty opinions should be excluded in its entirety. *See Power Integrations*, 711 F.3d at 1376 (vacating a district court’s remittur that was not supported by substantial evidence); *Carnegie Mellon University*, 807 F.3d at 1306-07.

### **C. Dr. McDuff’s Reasonable Royalty Calculation Based on a Comparable License is Unreliable**

Dr. McDuff’s alternative reasonable royalty opinion based on an old

[REDACTED] license agreement should be excluded for failure to show the license

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<sup>4</sup> Dr. McDuff does no analysis of whether [REDACTED] are necessarily NVIDIA DGX servers that incorporate the new NVIDIA Power Solution. Ex. A ¶ 102c. Nor does he explain how the statistics relate to direct infringement of the NVIDIA DGX servers. Ex. A ¶ 102d.

is “sufficiently comparable” to the license at issue. *See Lucent Techs.*, 580 F.3d at 1325. The patentee has “the burden to prove that the licenses [are] sufficiently comparable” to support the damages opinion. *Id.* at 1329. Courts have required “vigilance when considering past licenses to technologies *other* than the patent in suit.” *ResQNet.com*, 594 F.3d at 869.

Dr. McDuff identified [REDACTED] license agreement between [REDACTED] [REDACTED], as “sufficiently technically and economically comparable to the hypothetical negotiation for the Patents-in-Suit.” Ex. A ¶ 93; Ex. J. However, the scope, structure, and purpose of this agreement are “radically different from the hypothetical agreement under consideration” for the Asserted Patents. *Lucent Techs.*, 580 F.3d at 1327. The agreement was executed on May 1, 2005 and granted a non-exclusive right to use, copy, and modify the Licensed Technology<sup>5</sup> to make, use, and sell Licensed Products<sup>6</sup>, within the authorized territory. Ex. J at 569-70. The purpose of the agreement was to enable [REDACTED] to manufacture and sell

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<sup>5</sup> [REDACTED]

[REDACTED] Ex. J at 570.

<sup>6</sup> [REDACTED]

[REDACTED] Ex. J at 570.

integrated switch technologies outside the United States. *Id.* at 569. This is not comparable to the purpose of the hypothetical agreement in this case, where MPS is not seeking to manufacture or sell Volterra/Maxim's products. Dr. McDuff fails to account for the differences between the purpose of this agreement and the hypothetical agreement, which inevitably affect the negotiating standpoint of both parties. *See generally* Ex. A ¶¶ 92-95.

Additionally, [REDACTED]

[REDACTED] *Id.* at 570. While the '986 Patent was issued at the time of [REDACTED]

[REDACTED] [REDACTED] the hypothetical agreement in this case would be limited to licensing the Asserted Patents—and [REDACTED] for use in the United States. Yet Dr. McDuff fails to account for the difference in [REDACTED]

[REDACTED]. *See generally* Ex. A ¶¶ 92-95. But a comparable license should be "commensurate" with what the defendant has been alleged to have appropriated. *ResQNet.com*, 594 F.3d at 872. Thus, Dr. McDuff fails to show the agreement is comparable to the hypothetical agreement.

Further, Dr. McDuff fails to account for the differences in structure between the prior agreement and hypothetical agreement. For example, [REDACTED] [REDACTED], and even though the agreement includes a clause

declaring itself at [REDACTED]

[REDACTED] Warsaw

*Orthopedic, Inc. v. NuVasive, Inc.*, 778 F.3d 1365, 1377-78 (Fed. Cir. 2015). The agreement was also executed [REDACTED], nearly [REDACTED] the hypothetical negotiation date. [REDACTED]

[REDACTED] *Sprint Commc'ns Co. L.P. v. Comcast IP Holdings, LLC*, No. 12-1013-RGA, 2015 WL 456154, at \*2 (D. Del. Jan. 30, 2015). [REDACTED]

[REDACTED]  
[REDACTED]  
Ex. G at 25:19-26:16. Dr. McDuff baldly concludes that “no quantitative adjustment” is required because the agreement is “technically comparable to the licensed technology in the hypothetical negotiation” and [REDACTED]

[REDACTED] Ex. A ¶ 92b. [REDACTED]

[REDACTED] Thus, Dr. McDuff relied on a license that is incomparable, and his opinion on this issue should be excluded.

## VI. CONCLUSION

MPS respectfully requests that the Court grant its motion to exclude testimony and opinions from Dr. McDuff for all damages using the unreliable apportionment

factor, the per-unit royalty using non-infringing sales, and the royalty based on license not commensurate in scope.

*/s/ Nathan R. Hoeschen*

---

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Dated: November 19, 2021

**CERTIFICATE OF COMPLIANCE WITH STANDING ORDER  
REGARDING BRIEFING**

I hereby certify that the foregoing **Defendant's Brief in Support of Their**  
***Daubert Motion To Exclude The Testimony Of Plaintiff's Damages Expert,***  
**Deforest McDuff, Ph.D** complies with the typeface requirements and word limits  
of Paragraph 20(c) of the Scheduling Ordered entered in this case (D.I. 69). This  
brief has been prepared in 14-Point Times New Roman and contains 4,106 words,  
excluding the cover page, table of contents, table of authorities, index of exhibits,  
signature block, and this certificate of compliance. Defendants' case dispositive  
motions and *Daubert* motions combined contain 12,500 words or less.

/s/ Nathan R. Hoeschen

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**CERTIFICATE OF SERVICE**

I, Nathan R. Hoeschen, hereby certify that on November 19, 2021, this document was served on the persons listed below in the manner indicated:

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*Attorneys for Defendant*

IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF DELAWARE

VOLTERRA SEMICONDUCTOR )  
LLC, )  
Plaintiff, ) Redacted - Public Version  
v. )  
MONOLITHIC POWER SYSTEMS, ) C.A. No. 19-2240-CFC-SRF  
INC., ) [REDACTED]  
Defendant. )

**DECLARATION OF BOB STEINBERG IN SUPPORT OF  
DEFENDANT MONOLITHIC POWER SYSTEMS, INC.'S  
MOTION TO EXCLUDE THE TESTIMONY OF PLAINTIFF'S DAMAGES  
EXPERT, DEFOREST MCDUFF, PH.D.**

OF COUNSEL:

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(202) 408-4000

Dated: November 19, 2021

1. I, Bob Steinberg, am an attorney with Latham & Watkins LLP, admitted *pro hac vice* before this honorable Court to represent defendant Monolithic Power Systems, Inc. (“MPS”) in this matter. I provide this declaration based on my personal knowledge.

2. Attached as Exhibit A is a true and correct copy of the Expert Report of DeForest McDuff, Ph.D., which is dated September 17, 2021.

3. Attached as Exhibit B is a true and correct copy of the Reply Expert Report of DeForest McDuff, Ph.D., dated October 8, 2021

4. Attached as Exhibit C is a true and correct copy of an excerpt from a [REDACTED], which has been produced in this litigation by Volterra as MAXIM\_00014151.

5. Attached as Exhibit D is a true and correct copy of excerpts from the transcript of DeForest McDuff, Ph.D.’s Deposition, dated October 21, 2021.

6. Attached as Exhibit E is a true and correct copy of excerpts from the transcript of Alberto Viviani’s Deposition, dated October 19, 2021.

7. Attached as Exhibit F is a true and correct copy of excerpts from the transcript of Ahmed Abou-Alfotouh’s Deposition, dated September 9, 2021.

8. Attached as Exhibit G is a true and correct copy of excerpts from the transcript of Jeffrey Koch’s Deposition, dated September 10, 2021.

9. Attached as Exhibit H is a true and correct copy of Volterra's Expert Disclosures.

10. Attached as Exhibit I is a true and correct copy of excerpts from Volterra's Second Supplemental Responses to MPS's First Set of Interrogatories (Nos. 1-6).

11. Attached as Exhibit J is a true and correct copy of a [REDACTED]  
[REDACTED] which has been produced in this litigation by Volterra as MAXIM\_00014568.

12. Attached as Exhibit K is a true and correct copy of [REDACTED]  
[REDACTED]  
[REDACTED], which has been produced in this litigation by Volterra as MPS\_DE-00011034.

I declare under penalty of perjury that the foregoing is true and correct.  
Executed on November 19, 2021.

/s/ Bob Steinberg  
Bob Steinberg

**CERTIFICATE OF SERVICE**

I, Nathan R. Hoeschen, hereby certify that on November 19, 2021, this document was served on the persons listed below in the manner indicated:

**BY EMAIL**

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*/s/ Nathan R. Hoeschen*

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*Attorneys for Defendant*

## **EXHIBITS A-G**

**REDACTED IN THEIR ENTIRETY**

# EXHIBIT H

**Weston, Tiffany (DC)**

---

**From:** David Barkan <Barkan@fr.com>  
**Sent:** Friday, May 7, 2021 4:19 PM  
**To:** Steinberg, Bob (CC); Moore, Matthew (DC); Yeh, Thomas (LA); Ravula, Kumar (CH); lionel.lavenue@finnegan.com; r.benjamin.cassady@finnegan.com; nhoeschen@shawkeller.com; kkeller@shawkeller.com; arussell@shawkeller.com; Cremer, John (DC)  
**Cc:** David Barkan; Robert Oakes; Aaron Pirouznia; Noel Chakkalakal; Julie Wheeler; Christie Horsley  
**Subject:** Volterra v. MPS: Expert Disclosure Under Section 12 of PO - DeForest McDuff  
**Attachments:** PO Appendix A - McDuff [signed 20210408].pdf; McDuff CV -- 2021.pdf

Dear Counsel:

I write to disclose DeForest McDuff, Ph.D., as an outside expert pursuant to Section 12(c) of the Protective Order. Dr. McDuff's completed Protective Order Undertaking, and curriculum vitae, which includes a list of all litigation and engineering related consulting performed in the past five years, are attached. In addition, pursuant to Section 12(d) and footnote 2 of the Protective Order, this disclosure also covers Dr. McDuff's professional staff working under his supervision.

Best regards,

David Barkan

**David Barkan :: Principal :: Fish & Richardson P.C.**

650 839 5065 direct :: [barkan@fr.com](mailto:barkan@fr.com)

[fr.com](http://fr.com) :: [Bio](#) :: [LinkedIn](#) :: [Twitter](#)

\*\*\*\*\*  
\*\*\*\*\*  
This email message is for the sole use of the intended recipient(s) and may contain confidential and privileged information. Any unauthorized use or disclosure is prohibited. If you are not the intended recipient, please contact the sender by reply email and destroy all copies of the original message.  
\*\*\*\*\*  
\*\*\*\*\*

**Weston, Tiffany (DC)**

---

**From:** David Barkan <Barkan@fr.com>  
**Sent:** Monday, May 17, 2021 1:04 PM  
**To:** Cremer, John (DC); Robert Oakes; Aaron Pirouznia; chakkalakat@fr.com; Julie Wheeler; Christie Horsley; Steinberg, Bob (CC); Moore, Matthew (DC); Yeh, Thomas (LA); Ravula, Kumar (CH); lionel.lavenue@finnegan.com; r.benjamin.cassady@finnegan.com; nhoeschen@shawkeller.com; kkeller@shawkeller.com; arussell@shawkeller.com  
**Cc:** David Barkan  
**Subject:** Volterra v. MPS: Expert Disclosure Under Section 12 of PO - Dr. James Dickens  
**Attachments:** James Dickens CV.pdf; James Dickens Trial Testimony and Depositions.pdf; Dickens Signed Protective Order.pdf

Counsel,

Pursuant to Section 12(c) of the Stipulated Protective Order (Dkt. 80), Volterra hereby discloses Dr. James Dickens as an expert who may receive Designated Material, as defined in footnote 1 and Paragraph 5 of the Protective Order. Please find attached Dr. Dickens's signed Undertaking (Ex. A to the Protective Order) along with his CV which identifies his engineering consulting and a list of all litigation consulting for at least the prior 5 years.

Best regards,  
David

\*\*\*\*\*  
\*\*\*\*\*  
This email message is for the sole use of the intended recipient(s) and may contain confidential and privileged information. Any unauthorized use or disclosure is prohibited. If you are not the intended recipient, please contact the sender by reply email and destroy all copies of the original message.  
\*\*\*\*\*  
\*\*\*\*\*

# EXHIBIT I

**IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF DELAWARE**

VOLTERRA SEMICONDUCTOR LLC,

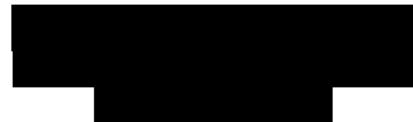
Plaintiff,

v.

MONOLITHIC POWER SYSTEMS, INC.,

Defendant.

C.A. No. 19-2240-CFC



**PLAINTIFF'S SECOND SUPPLEMENTAL OBJECTIONS AND RESPONSES TO  
DEFENDANT'S FIRST SET OF INTERROGATORIES TO PLAINTIFF (NOS. 1-6)**

Pursuant to Rules 26 and 33 of the ~~Federal Rules~~ of Civil Procedure, Plaintiff Volterra Semiconductor LLC (“Volterra”) hereby serves their Second Supplemental Objections and Responses to Defendant Monolithic Power Systems, Inc. (“Monolithic”)’s First Set of Interrogatories (Nos. 1-6).

**GENERAL OBJECTIONS**

1. Volterra objects to the Interrogatories, “Instructions,” and “Definitions,” to the extent that they are inconsistent with, enlarge upon, or exceed the scope of discovery authorized by the Federal Rules of Civil Procedure, the Local Rules of the District of Delaware, any applicable Court Order, or any stipulation or agreement between the parties. Volterra will abide by the Federal Rules of Civil Procedure, the Local Rules of the United States District Court for the District of Delaware, any applicable Court Order, and any stipulation or agreement between the parties in responding to Monolithic’s Interrogatories.

2. By identifying a document in response to an Interrogatory, Volterra does not admit that the document is free of information that is privileged or immune from discovery, nor does Volterra waive its right to withhold any portion of the document that is privileged or immune from discovery.

[REDACTED]

Pursuant to Rule 33(d) of the Federal Rules of Civil Procedure, Volterra will identify and produce documents under Rule 33(d) that contain relevant and non-privileged information relevant to this Interrogatory. Volterra further states that its response will be based in part on, but not limited to, yet to be produced information from Monolithic. Discovery is ongoing, and Volterra reserves its right to supplement its response based on information to be produced by Monolithic and in accordance with the Federal and Local Rules.

**FIRST SUPPLEMENTAL RESPONSE TO INTERROGATORY NO. 1 (9/7/2021):**

Subject to and without waiving the foregoing objections, Volterra supplements its response as follows:

Volterra identifies the deposition transcripts of Dawson Huang, Bernie Blegen, Roland Tso and Jinghai Zhou as having information relevant to this Interrogatory. Volterra further identifies the upcoming deposition of Ahmed Abou-Alfotouh as having information relevant to this Interrogatory.

**INTERROGATORY NO. 2:**

For each Accused Product and Volterra Asserted Claim, describe in detail and identify the factual and legal bases for Your claim for damages to which You contend You are entitled as a result of Defendant's alleged infringement, including without limitation, whether Your damages claims are based on lost profits, a reasonably royalty, or other damages theory, any royalty rate, royalty base, lost profits, disgorgements, enhanced damages, attorney's fees, or costs that You contend are appropriate, Your products that you contend compete with the Accused Products, noninfringing alternatives, the date You contend the hypothetical negotiation would have commenced with respect to each Volterra Asserted Patent, the time period for which You contend You are entitled to collect damages from Defendant due to any alleged infringement of each Volterra Asserted Patent, and whether the royalty base is based on the value of the entire product

**RESTRICTED - ATTORNEYS' EYES ONLY**

or a portion thereof (if so, identify the portion); identify all Documents and things supporting, contradicting, or otherwise relating to Your contentions; and identify the three (3) most knowledgeable Persons concerning the facts described in Your response and all Persons on which you intend to rely to support Your contentions.

**RESPONSE TO INTERROGATORY NO. 2:**

In addition to the General Objections and Definition Objections, which are incorporated by reference as though fully set forth herein, Volterra objects to this Interrogatory as compound in that it contains multiple, discrete subparts in a single interrogatory and will consider each subpart to be a separate interrogatory for purposes of calculating the number of interrogatories utilized by Monolithic. Volterra also objects to this Interrogatory as vague, ambiguous, overbroad, and unduly burdensome with respect to the terms “without limitation,” “any royalty rate, royalty base, lost profits, disgorgements, enhanced damages, attorney’s fees, or costs,” “all Documents and things,” and “all Persons” and the requirement that Volterra “identify the three (3) most knowledgeable Persons.” Volterra further objects to this Interrogatory to the extent it seeks expert opinion or analysis or calls for a legal conclusion. Subject to and without waiving the foregoing objections, Volterra responds as follows:

Volterra has been investing in coupled inductor technology for more than two decades and has made substantial investments in R&D and innovation. Volterra’s investment areas include system efficiency, current ripple, layout optimization, control algorithms, compensation and slope settings, transient optimization, and enabling multiple sources for the manufacture of coupled inductors. In that regard, Volterra has invested in building an extensive IP portfolio around its power management technologies. Volterra has more than 40 issued US patents related to coupled inductors and magnetics, including many with international filings, and more than 30 pending US applications related to coupled inductors and magnetics.

**RESTRICTED - ATTORNEYS' EYES ONLY**

Volterra's coupled inductor technology is essential in meeting the increasing power demands that accompany modern technologies. The importance of this technology is evidenced by the technical publications authored by Monolithic's engineers. As discussed in response to Interrogatory No. 1, multiple Monolithic senior engineers have written technical papers in which they discussed the '986 patent and the Volterra patented designs at length. In Mr. Zhou's April 22, 2005 Dissertation, entitled "High Frequency, High Current Density Voltage Regulators," he recognized that "the transistors per die in microprocessors have increased steadily in the past decade" and "[t]he increases in the microprocessors' speed and transistor number have resulted in an increase in power demands." (Zhou Dissertation at 1). Mr. Zhou went on to analyze what he called the "scalable multi-phase surface mount coupling inductor structure proposed by Volterra," and to illustrate what he meant by the structure proposed by Volterra, Mr. Zhou cited the '986 patent as well as multiple related papers by the inventors of the '986 patent. (*Id.* at 130).

Similarly, in Mr. Dong's Dissertation, entitled "Investigation of Multiphase Coupled-Inductor Buck Converters in Point-of-Load Applications," he recognized that "the number of transistors per die has increased steadily in the last 50 years" and "[t]he increases in the integrated circuit's speed and number of transistors have resulted in an increase in power demand." (Dong Dissertation at 1-2). "To meet these requirements, multiphase interleaving buck converters are adopted for today's microprocessor." (*Id.* at 2). Mr. Dong went on to analyze Volterra's coupled inductor technology and cited papers written by the inventors of the '986 patent. (*Id.* at 21-23).

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Monolithic has used and is using Volterra's patented technology – included the patents asserted here – without a license, and Volterra is entitled to recover the profits it would have received but for Monolithic's infringement. This infringement allowed Monolithic to fulfill customer demand that otherwise would have been met by Volterra. Moreover, the absence of acceptable noninfringing alternatives is evidenced by those customers' decision to use the infringing products supplied by Monolithic. Volterra had the manufacturing and marketing capability to fill these customers' demand and would have done so but for Monolithic's infringement.

Volterra identifies employees Rizwan Khalid, Andrea Pizzutelli, and Thuerin Paing as having knowledge concerning the facts described in response to this Interrogatory.

Volterra further responds that the calculation of any reasonable royalty damages will be based in part on, but not limited to, [REDACTED], the importance of the patented technology, as well as yet to be produced information from Monolithic. Pursuant to Rule 33(d) of the Federal Rules of Civil Procedure, Volterra will identify and produce documents under Rule 33(d) that contain relevant and non-privileged information relevant to this Interrogatory. Discovery is ongoing, and Volterra reserves its right to supplement its response based on information to be produced by Monolithic and in accordance with the Federal and Local Rules.

**FIRST SUPPLEMENTAL RESPONSE TO INTERROGATORY NO. 2 (10/26/2020):**

Subject to and without waiving the foregoing objections, Volterra supplements its response as follows:

[REDACTED]  
[REDACTED]  
[REDACTED] See MAXIM\_00007796-MAXIM\_00007800.

**SECOND SUPPLEMENTAL RESPONSE TO INTERROGATORY NO. 2 (9/7/2021):**

Subject to and without waiving the foregoing objections, Volterra supplements its response as follows:

Volterra identifies the deposition transcripts of Dawson Huang, Bernie Blegen, Roland Tso, Jinghai Zhou, Stan Bochenek, John Weidman, Alberto Viviani, Rizwan Khalid, Andrea Pizzutelli, Thurein Paing, and Alexandr Ikriannikov as having information relevant to this Interrogatory. Volterra further identifies the upcoming deposition transcript of Ahmed Abou-Alfotouh as having information relevant to this Interrogatory. Volterra also identifies the following production documents as having information relevant to this Interrogatory: MAXIM\_00013927; MAXIM\_00014123, MAXIM\_00014151, MPS\_DE-00011029 and MPS\_DE-00011034.

**INTERROGATORY NO. 3:**

Describe the complete factual and legal basis for Your contention that You are entitled to any injunctive relief, including any irreparable injury You have allegedly suffered, and why such injury is irreparable, why remedies available at law, such as monetary damages, are inadequate to compensate for that injury, why, considering the balance of hardships between You and Defendant, a remedy in equity is warranted, why the public interest would not be disserved by a permanent injunction, and identify the three (3) Individuals most knowledgeable of the foregoing, and all Documents and things (by Bates number) You intend to rely on to support Your contention.

**RESPONSE TO INTERROGATORY NO. 3:**

In addition to the General Objections and Definition Objections, which are incorporated by reference as though fully set forth herein, Volterra objects to this Interrogatory as vague, ambiguous, overbroad, and unduly burdensome with respect to the terms “any injunctive relief” and “any irreparable injury.” Volterra further objects to this Interrogatory to the extent it seeks expert opinion or analysis or calls for a legal conclusion. Subject to and without waiving the

## **EXHIBITS J-K**

**REDACTED IN THEIR ENTIRETY**